CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

SECRET
SECURITY INFORMATION

COUNTRY	East Germany	REPORT NO.	[redacted] 25X1A
SUBJECT	Development of Ship's Radar Device at Funkwerk Koepenick	DATE DISTR.	4 June 1953
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SOURCE: [redacted] 25X1X

1. [redacted] 25X1X

2. The order prescribed the development of a ship's radar device, called anti-collision instrument (Kollisionsschutzgeraet) by the end of 1953. Manthey advanced the completion date to the end of 1952.

3. At the end of 1952, a rough laboratory model was completed. Its characteristics are as follows:

   a. Transmitter magnetron 730A after the US model. Transmission frequency 3.2 cm. Impulse power 15 kilowatts. Pulsing frequency 1,000 cycles per second. Continuous output 15 watts. Impulse width 0.5 microseconds.

   b. Antenna rotation paraboloid made of sheet aluminum 2 mm thick. Focal length estimated 540 mm. Opening width estimated 150 cm. Solid aluminum, not screen. The antenna was developed by Erich Schuettloeffel, returnee from Russia.

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c. The estimated weight of the total installation is 300 kg.

4. The instrument can be used as a ground installation but only ship-borne use is being considered. Because of its weight, airborne use is impossible and is not being considered.

5. The range to be attained is 30 kilometers at sea. Until now, the range attained is 15 kilometers on land.

6. Since the beginning of 1953, development has been concentrated on improving the installation. There have been no essential changes.

7. The final completion date is 1 July 1953; it will probably be met. Then two pilot models will be constructed by the end of 1953. The first tests aboard ship are scheduled for January or February 1954.

8. The instrument is in Manthey's laboratory in the Funkwerk building with a tower antenna mounted on top of the tower.

9. The magnetron was furnished by HF Werk Oberschoeneweide, where it was built after an American model by Bleick (fnu), either during or shortly after the war. No magnetron of this type has been built recently in the HF Werk. Funkwerk Koepenick obtained a total of five magnetrons of this type from the HF Werk. Two were destroyed during the development work; one is in the completed device; two are being kept for pilot models. The HF Werk has accepted an order from Funkwerk Koepenick for the construction of twenty additional magnetrons of this kind. The construction is to be carried out in Dr. Ignatz Ladurner's department.

10. In 1952, Russian commissions led by Litvinov (fnu), who was the only expert among the Russians, repeatedly inspected the development work. The Russians apparently were not much interested, because of the weight of the device. Litvinov stated the Russians would be interested in a device of less weight. Their last visit was around Christmas 1952.

11. In December 1952, Manthey asked Russian assistance, particularly in the delivery of magnetrons, klystrons, mixer detectors, and nullodes (sic). The Russians promised them but never delivered them.

12. After completion of the development of this device, the next development will be of a similar device for airborne use. This is not yet official but has been indicated unofficially.